

*ANTROMYSIS (SURINAMYSIS) MERISTA*, A NEW  
FRESHWATER MYSID FROM VENEZUELA  
(CRUSTACEA: MYSIDACEA)

Thomas E. Bowman

*Abstract.*—*Antromysis (Surinamysis) merista*, a second species of the subgenus *Surinamysis*, is described from a gully adjacent to the Orinoco River near Barrancas, Venezuela. The species exhibits unusual sexual dimorphism: the ♂ antenna 1 has a long flagelliform process in addition to the 2 flagella; pereopod 6 has a multisegmented carpopropus in the ♂ but not in the ♀.

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Only 3 species of freshwater mysids are known from South America, all members of the genus *Antromysis* and all known only from Surinam. These are *A. (Surinamysis) americana* (Tattersall, 1951), *A. (Parvimysis) almyra* (Brattegard, 1977), and *Antromysis* sp. Brattegard 1977, the latter not given a specific name because it was represented by only a single female. These 3 species were described by Brattegard (1977); the first 2 were assigned to *Diamysis* by Brattegard, but were transferred to *Antromysis* by Bowman (1977a).

The species described below was recorded in a checklist of South American freshwater mysids (Bowman, 1977b) as *Diamysis americana* Tattersall. While preparing a check list of tropical South American freshwater mysids (Bowman, in press), I reexamined the specimens and found that they are superficially very similar to Tattersall's species, but exhibit clear-cut differences in male secondary sexual characters that necessitate establishment of a new species.

*Antromysis (Surinamysis) merista*, new species

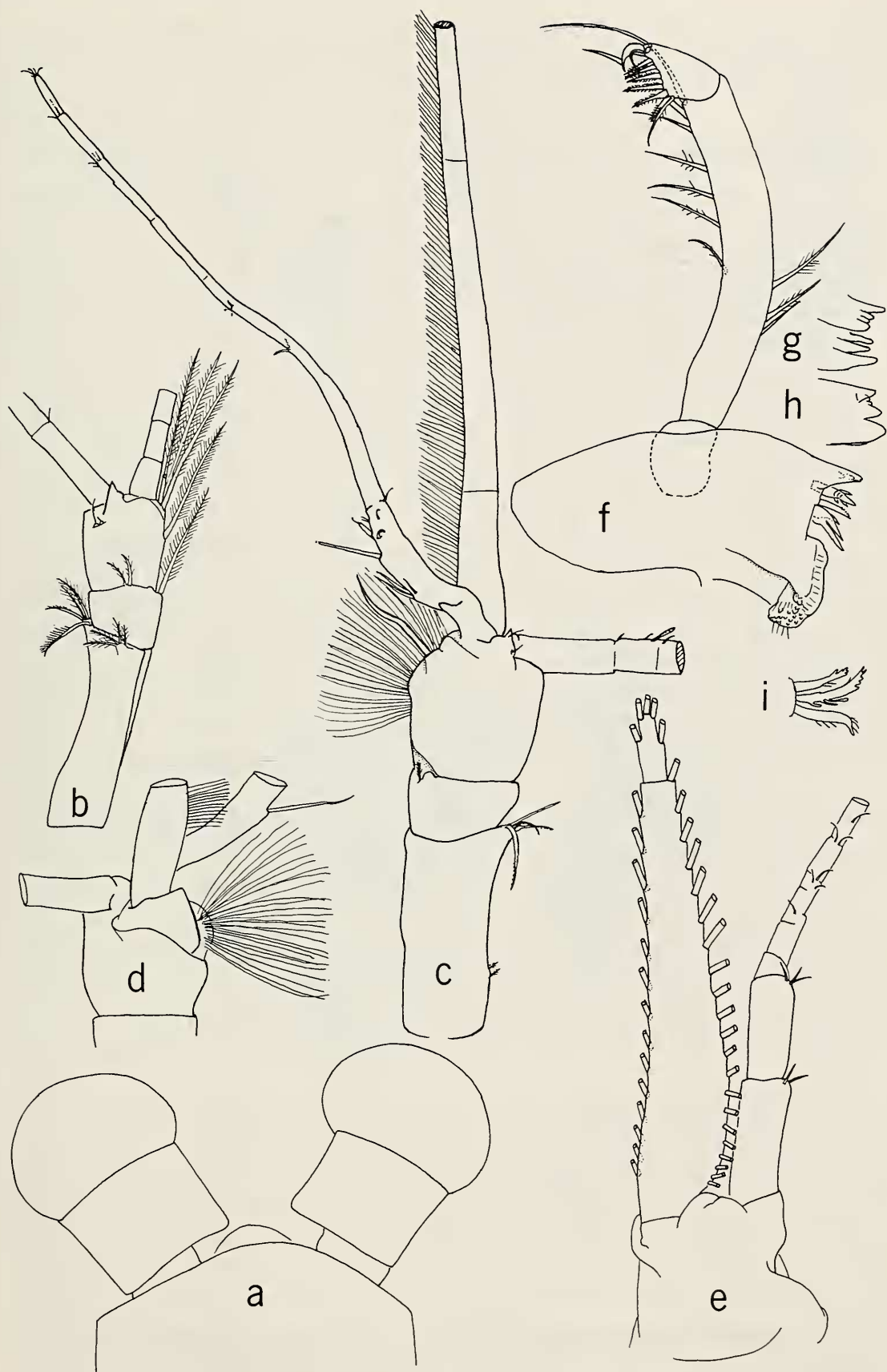
Figs. 1–4

*Diamysis americana* Tattersall.—Bowman, 1977b:149.

*Material examined.*—Venezuela, Monagas State, near Barrancas, wide shallow (maximum depth < 2 m) meandering gully, leg. Edward S. Deevey,

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Fig. 1. *Antromysis (surinamysis) merista*: a, Rostrum and eyes, dorsal, ♂; b, Antenna 1, ♀ dorsal; c, Antenna 1, ♂, dorsal; d, Antenna 1, ♂, ventral; e, Antenna 2, ♀, dorsal; f, Right mandible, ♀; g, Incisor and lacinia, left mandible, ♀; h, Incisor, right mandible, ♀; i, Spine row, left mandible, ♀.



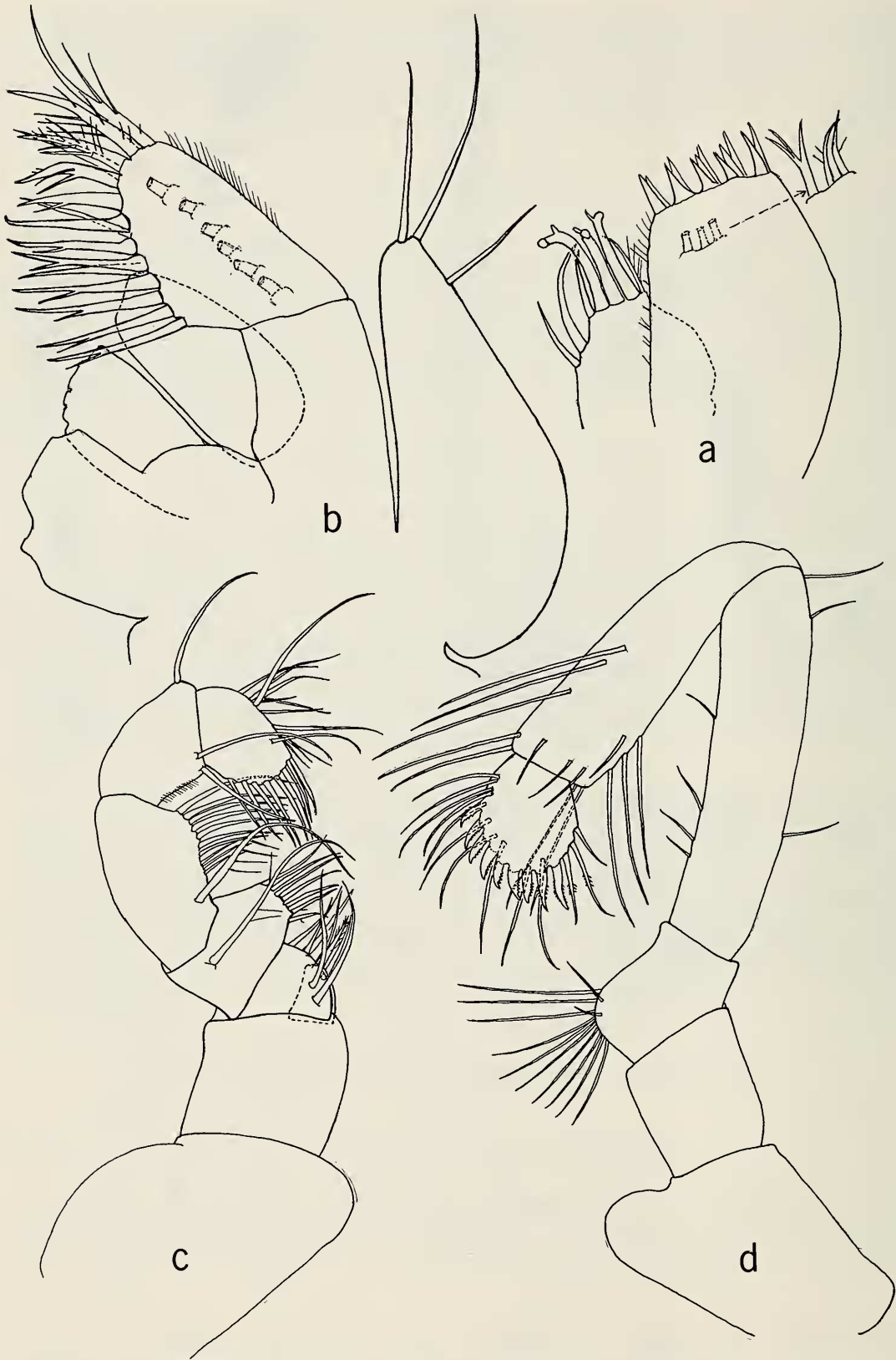


Fig. 2. *Antromysis (Surinamysis) merista*, ♂: a, Maxilla 1; b, Maxilla 2; c, Maxilliped; d, Pereopod 1.

Jr., and Georgiana B. Deevey, 26 November 1967: ♂ holotype (USNM 173131), 2♂ 8♀ paratypes (USNM 144056). At the time of collection the gully was not connected with the nearby Orinoco River, but obviously would connect when the river was in flood.

*Etymology*.—From the Greek “meristos” (divided), referring to the multisegmented carpopropus in ♂ pereopod 6.

*Description*.—Length of largest ♂ 7.2 mm, of ♂ holotype 6.7 mm, of largest ♀ 6.2 mm. Rostrum round-truncate, not covering base of eyestalk. Carapace emarginate posterodorsally, exposing last 2 pereonites. Cervical groove well developed. Eyes well developed; cornea occupying distal half, about  $1.6\times$  as wide as long, distinctly wider than eyestalk; eyestalk short, wider than long. Telson about  $1.5\times$  as long as width at base; lateral margins slightly concave, each armed along anterior  $\frac{4}{5}$  with 6–8 subequal spines; each apical lobe with spine subequal to or longer than lateral spines; apical margin concave, depth of concavity about  $\frac{1}{10}$  length of telson, concavity armed with 12–16 teeth. ♀ antenna 1, peduncle segment 1 about  $\frac{1}{3}$  longer than segments 2 and 3 combined, with groups of setae on anterolateral lobe and middorsal lobe; segment 3 with triangular middorsal lobe. ♂ antenna 1, peduncle segment 1 about as long as segments 2 and 3 combined, without middorsal lobe; ♂ lobe on segment 3 low, rounded, densely setose; in addition to usual 2 flagella, segment 3 bears dorsally a long, slender flagellum-like process obscurely segmented by a few incomplete sutures and sparsely armed with setae. Antenna 2 scale lanceolate, extending beyond antenna 1 peduncle, about  $6\times$  as long as wide; distal segment about  $\frac{1}{7}$  length of whole scale, more than  $2\times$  as long as wide.

Right incisor with 3 large and 2 minute teeth; left incisor with 3 teeth, lacinia with 4 teeth. Spine rows each with 3 spines having different forms as illustrated. Maxilla 1 outer lobe with 12 terminal spines arranged in 5 rows and 3 subterminal surface setae; inner lobe with 7 terminal spines, 3 of them stouter and having rounded apex and subterminal twig. Maxilla 2, endopod 2-merous; segments subequal, distal segment with 15 marginal setae, both simple and bifurcate, and 6 surface setae; exopod reaching slightly beyond proximal endopod segment, with 3 distal setae. Maxilliped densely setose.

Pereopod 1 similar to that of *A. (S.) americana* as illustrated by Brattegard (1977, fig. 2G), but merus longer compared with carpopropus. Pereopods 2–3, ischium with proximal cluster of plumose setae; merus longer than ischium but shorter than 2-merous carpopropus, anterior margin with a few recurved spines; proximal carpopropus segment with several groups of slender spines having angular bend near midlength. Pereopod 4 sexually dimorphic; merus stouter in ♂; both merus and proximal carpopropus with many long marginal setae in ♂, with only a few scattered setae in ♀. Pereopod 6 with extraordinary sexual dimorphism; much longer in ♂ than in



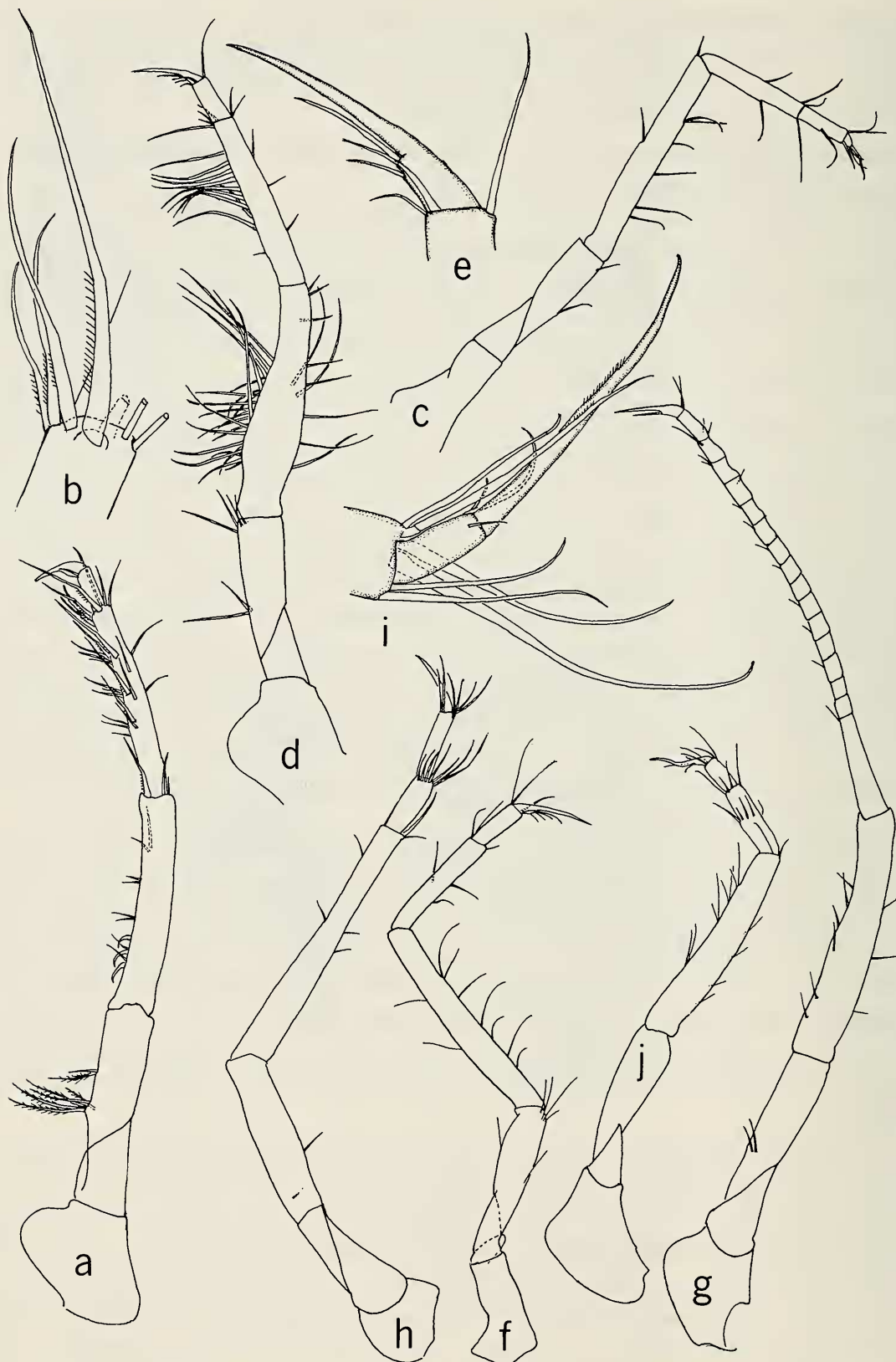


Fig. 3. *Antromysis (Surinamysis) merista*: a, Pereopod 2, ♂; b, Same, suture between segments of carpopropus with distal carpal spines; c, Pereopod 4, ♀; d, Pereopod 4, ♂; e,

♀; ♀ carpopropus 2-merous; ♂ carpopropus 16-merous. Pereopod 7 with elongate merus, 1.5× length of ischium; distal margins of carpopropus segments with long setae.

♂ pleopod 4 like that of *A. (S.) americana*, but apparently with 1 more seta on exopod, and 3- rather than 2-merous exopod.

Uropod endopod about 2× length of telson and ¾ length of exopod, similar to that of *A. (S.) americana*.

*Relationships.*—The principal differences between *A. (S.) merista* and the only other species of the subgenus *Surinamysis*, *A. (S.) americana*, are given below in tabular form:

	<i>americana</i>	<i>merista</i>
Length of cornea	1/3 total eye	1/2 total eye
Telson	cleft 1/5 length	emarginate 1/10 length
Sexually dimorphic		
pereopods	pereopod 7	pereopods 4 & 6
♂ pleopod 4 exopod	2-merous	3-merous

*Discussion.*—The extraordinary sexual dimorphism in pereopod 6 requires comment. Dimorphism involving multisegmentation of a thoracic appendage in 1 sex but not in the other has not, to my knowledge, been observed in any other mysidacean, and I am not aware of its occurrence in any crustacean. My familiarity with Crustacea is far from adequate to state categorically that this condition does not occur elsewhere in the Crustacea. According to Hansen (1925), in the subfamily Mysinae, except the tribe Erythropini, the carpus and propus of pereopods 2–7 are fused into a carpopropus which is secondarily subdivided into a variable number of segments. The number of secondary segments increases with size, and may be greater in the posterior than in the anterior pereopods. Ii (1964) gives a maximum of 20 subsegments for *Neomysis rayii* (Murdoch), but the numbers are usually much fewer. Sexual differences unrelated to size have not been recorded, and the situation in pereopod 6 of *A. (S.) merista* appears to be unique.

The flagelliform process of the ♂ antenna 1 is most unusual, and no comparable structure has been reported from a New World mysidacean. Neither Tattersall (1951) nor Brattegard (1977) recorded such a process from *A. (S.) americana*. Dr. Brattegard kindly sent me some of his ♂ specimens from Surinam, all of which have a flagelliform process similar to that of *A. (S.) merista* but differing in details (compare Figs. 1c and 4d). In the genus

←  
Same, dactyl; f, Pereopod 6, ♀; g, Pereopod 6, ♂; h, Pereopod 7, ♂; i, Same, dactyl. *Antromysis (Surinamysis) americana*: j, Pereopod 6, ♂.

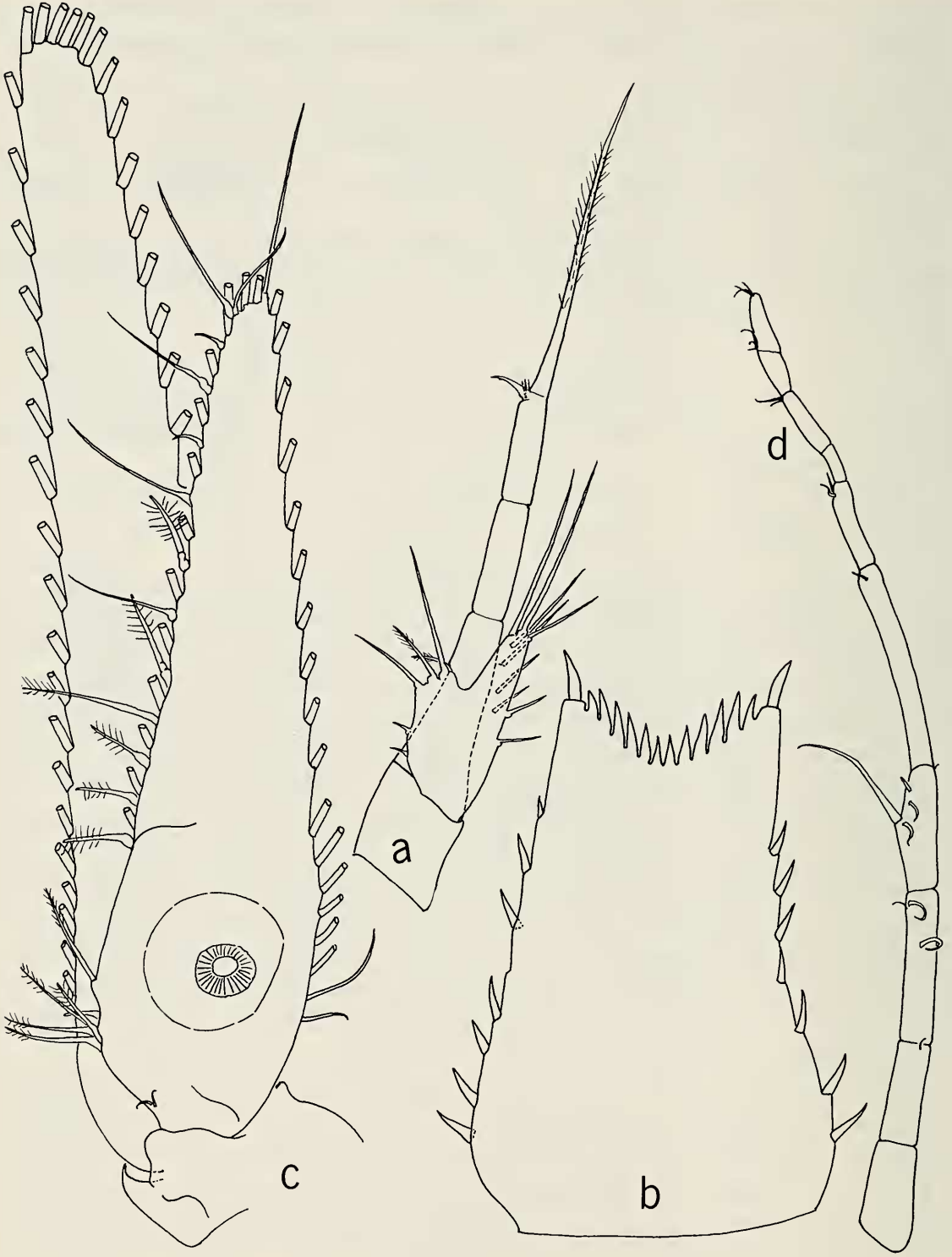


Fig. 4. *Antromysis (Surinamysis) merista*: a, Pleopod 4, ♂; b, Telson, ♀; c, Uropod, ♀. *Antromysis (Surinamysis) americana*, ♂; d, Antenna 1, flagelliform process.

*Mesopodopsis* Czerniavsky a similar process is present, consisting of a narrow long basal part armed distally with a single long slender seta. Four species are known, none from the New World, and none seems to be closely related to *Antromysis* (*Surinamysis*).

### Acknowledgments

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Department of Invertebrate Zoology (Crustacea), Smithsonian Institution, Washington, D.C. 20560.